

Explanation of Significant Differences  
General Motors Corporation - Central Foundry Division Superfund Site  
Massena, New York

**Introduction and Statement of Purpose**

The purpose of this Explanation of Significant Differences (ESD) is to explain the U.S. Environmental Protection Agency's (EPA's) changes to specific aspects of the remedy for the first Operable Unit (OU1) at the General Motors Corporation - Central Foundry Division Superfund Site (the Site) in Massena, New York. On December 17, 1990 EPA, as lead agency, issued a Record of Decision (ROD) for OU1, which was concurred on by the New York State Department of Environmental Conservation (NYSDEC) and the St. Regis Mohawk Tribe (SRMT). The 1990 OU1 ROD was amended on March 23, 1999.

The modification described in this ESD to the 1990 OU1 ROD deals only with the inactive lagoons at the Site. The 1990 OU1 ROD, in part, called for: 1- the excavation of materials contaminated with greater than 10 parts per million (ppm) of polychlorinated biphenyls (PCBs) from the inactive lagoons; 2- on-Site treatment of those materials; and 3- on-Site disposal of any treatment residuals. Under this ESD, all excavated materials with PCB concentrations greater than 10 ppm would be treated on-Site by solidification and then shipped off-Site to a secure facility for disposal. No treatment residuals would be disposed of on the GM property.

EPA is issuing this ESD in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §9617(c), and Section 300.435 (c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

**Public Participation**

EPA issued a proposed ESD on April 21, 2000 and held a public availability session on April 26, 2000 at the SRMT Housing Authority Auditorium to discuss the ESD. In addition, this document and supporting information are being made available to the public through their inclusion in the Administrative Record for OU1 for the Site. A copy of the Administrative Record is currently located at the following information repositories:

U.S. Environmental Protection Agency  
290 Broadway, 18th Floor  
New York, N.Y. 10007-1866  
By appt.: 212-637-3263

Massena Public Library  
41 Glenn Street  
Massena, N.Y. 13662  
M-Th, 9:30 am-9 PM  
F-Sat, 9:30 am-5 PM

St. Regis Mohawk Tribe  
412 State Route 37  
Hogansburg, N.Y. 13655

### **Site History, Contamination and Selected Remedy**

The General Motors (GM) Corporation - Central Foundry Division Superfund Site is located on Rooseveltown Road in St. Lawrence County, Massena, New York. The GM facility is bordered on the north by the St. Lawrence River, on the east by St. Regis Mohawk Tribal Lands, on the south by the Raquette River, and on the west by the Reynolds Metals Company and property owned by Conrail (Figure 1).

The Site consists of several areas (Figure 2). There are two inactive industrial lagoons at the Site containing PCB-contaminated liquids, sludges and solids. The Site also includes contaminated sediments and associated wetlands of the Raquette River and Turtle Creek (formerly called the "unnamed tributary on St. Regis Mohawk Tribal Lands"), contaminated soil on St. Regis Mohawk Tribal Lands and on the banks of the Raquette River, contaminated soil on the GM property not associated with the specific disposal areas already mentioned ("miscellaneous Site soils"), the North Disposal Area, the East Disposal Area (EDA), the Industrial Landfill and contaminated groundwater associated with the Site.

Land use in the area surrounding the Site consists of mixed residential and industrial uses. The Reynolds Metals Company facility is located immediately to the west of the Site, and the Alcoa facility is approximately eight miles away, also to the west. Both the Reynolds Metals Company and Alcoa sites are currently the subject of federal and state cleanup actions. St. Lawrence River flows are controlled by the Moses-Saunders Power Dam, located approximately four miles upstream from the Site.

The GM facility consists of approximately 270 acres of industrial and undeveloped land. Wetlands lie to the east of the facility in an area surrounding Turtle Creek. There are no known federally-listed endangered or threatened species inhabiting the St. Lawrence River. However, the River does support a number of New York State-listed endangered, threatened, and special concern fish species. The River and the adjacent areas also provide nesting for a variety of water birds and shore birds. Federally-listed threatened bald eagles have been reported in the Massena area.

GM has operated an aluminum diecasting plant at the Site since 1959. Until 1980, PCBs were a component of hydraulic fluids used in diecasting machines at the GM facility. PCBs provided protection against fire and thermal degradation in the high temperature environment of the diecasting machines. GM no longer uses the diecasting process or PCBs at the facility; however, PCB-contaminated materials remain at the Site.

The GM Site was placed on the Superfund National Priorities List (NPL) in September 1983 as a result of contamination related to GM's past waste disposal practices. In 1985, GM entered into an Administrative Order on Consent (Index No. II CERCLA-50201) with EPA to perform a remedial investigation (RI) and feasibility study (FS) to determine, among other things, the extent to which PCBs were present in the soil, groundwater, and sediments. RI and FS reports were completed in June and November 1989, respectively.

Based on the information provided in the RI and FS, EPA issued two RODs for the Site. The OU1 ROD was issued in December 1990. It addressed contamination in the St. Lawrence River, GM Site soils, St. Regis Mohawk Tribal soils and sediments, the North Disposal Area, the Raquette River, surface water runoff, groundwater, and industrial lagoons.

The 1990 OU1 ROD called for the on-Site treatment of excavated materials from the areas listed above. The type of treatment was not specified, but in a later treatability study it was determined that those materials should be treated on-Site by thermal desorption. As discussed below, this approach was reconsidered.

The 1990 OU1 ROD was amended in March of 1999 to allow for the off-Site disposal, rather than on-Site treatment, of materials from the St. Lawrence River, Raquette River and materials excavated during the installation of the groundwater control system.

Pursuant to a Unilateral Administrative Order (Index No. II CERCLA-20207) issued by EPA in April of 1992 (1992 UAO) under Section 106(a) of CERCLA, 42 U.S.C. §9606(a), GM began implementation of the St. Lawrence River sediment dredging phase of the 1990 OU1 ROD in 1994. In 1995, the dredging of the St. Lawrence River was completed and was successful in removing the vast majority of the PCB mass in the river adjacent to the GM facility. The dredged contaminated sediments were temporarily stored on-Site in three engineered containment cells. Subsequently, they were removed from those storage cells and shipped to a secure disposal facility in 1999.

The second Operable Unit (OU2) ROD was issued in March 1992. It addressed contamination in the Industrial Landfill, East Disposal Area, and groundwater that flowed beneath those areas. GM commenced work on the Remedial Design for OU2 in September of 1992 under a Unilateral Administrative Order (Index No. II CERCLA-20215) issued by EPA in August of 1992, pursuant to Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

### **Basis For the Change**

The change to the 1990 OU1 ROD in this ESD deals only with what happens to the materials in the inactive lagoons *after* they are excavated and cleanup levels are met. The 1990 OU1 ROD called for the on-Site treatment of the materials excavated from the inactive lagoons, with treatment residuals to be disposed of on-Site in the East Disposal Area (EDA). After the OU1 ROD was issued, a treatability study indicated that the appropriate on-Site treatment method was thermal desorption. This ESD calls for the treatment of the contaminated lagoon materials on-Site by solidification rather than thermal desorption, and the disposal of those materials at a secure off-Site facility rather than on-Site disposal in the EDA.

There are four industrial lagoons at the Site. The 350,000 gallon oily waste lagoon and the 1.5 million gallon lagoon are considered inactive and are the subject of this ESD. The 10 million gallon mill water lagoon and the 500,000 gallon lagoon are considered active lagoons and are not addressed in this ESD. (Figure 2)

The oily waste lagoon is located just north of the waste water treatment building and was once used to collect oils removed from GM's waste water treatment system. The lagoon has been inactive for some time and currently only collects precipitation.

The 1.5 million gallon lagoon is located just north of two wastewater treatment system clarifiers. This lagoon currently collects storm water from the north and northeastern portions of the facility. Water collected in this lagoon is sent to the mill water lagoon for treatment.

In 1993, the inactive lagoons were sampled and found to contain approximately 11,700 cubic yards (CY) of soils, sediments and sludges with PCB concentrations above the 10 ppm PCB cleanup level specified in the OU1 ROD.

### **Description of Significant Differences**

The goal of EPA's selected remedy and the modified remedy remains the same: protecting human health and the environment by removing PCBs, thereby preventing any potential migration to groundwater or surface water run-off of contaminants. The cleanup requirements of the OU1 ROD (removal of materials with PCB concentrations greater than 10 ppm from the industrial lagoons) will be met; materials will be treated to reduce the mobility of PCBs and removed from the Site.

The modification has several added benefits when compared to the OU1 ROD. The change requires that materials still be treated; however, after treatment, no treatment residuals will be disposed of on the GM property, as was called for in the original OU1 ROD. All treated materials will be shipped off-Site, by rail, to a secure disposal facility.

A significant additional benefit is the reduced time it will take to implement the remedy. It would take over one year to design, test and operate an on-Site thermal treatment unit while it would only take four to five months to design, perform the on-Site solidification and ship the treated materials off-Site for disposal.

Although EPA is confident that a thermal treatment unit could effectively destroy contaminants at the Site without any adverse human or environmental impacts, EPA is aware of the community's concerns regarding airborne exposure to PCBs. By selecting a treatment alternative involving solidification, the concerns regarding emissions from the thermal treatment unit are eliminated.

The costs for design and operation of a thermal treatment are similar to the costs for on-Site treatment by solidification with off-Site disposal of treated materials. The approximate cost for on-Site treatment by thermal desorption is 4.9 million dollars. The approximate cost for on-Site treatment by solidification with off-Site disposal at a secure landfill is 5.1 million dollars.

#### **AFFIRMATION OF STATUTORY DETERMINATIONS**

EPA, after consultation with NYSDEC and SRMT, is issuing this ESD. The remedy, as modified by this ESD, will be as protective of human health and the environment as the OU1 ROD remedy for these components.

The modified remedy complies with the federal and state standards as specified in the OU1 ROD. In addition, the modified remedy is technically feasible, cost-effective, and provides for treatment that permanently and significantly reduces the mobility and volume of PCBs at the Site.

# Site Location Map

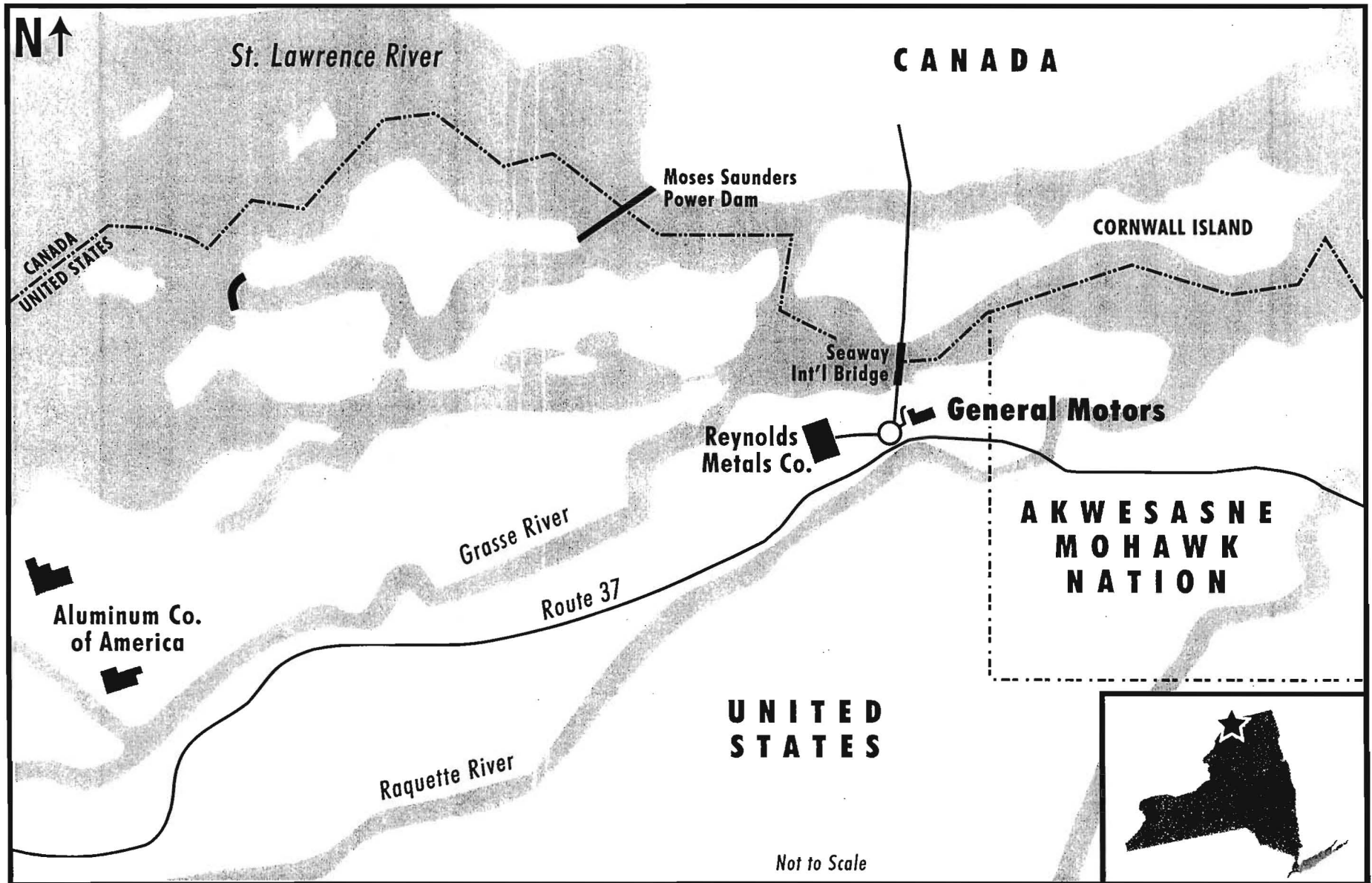


Figure 1

# PCB Contamination in the General Motors Site

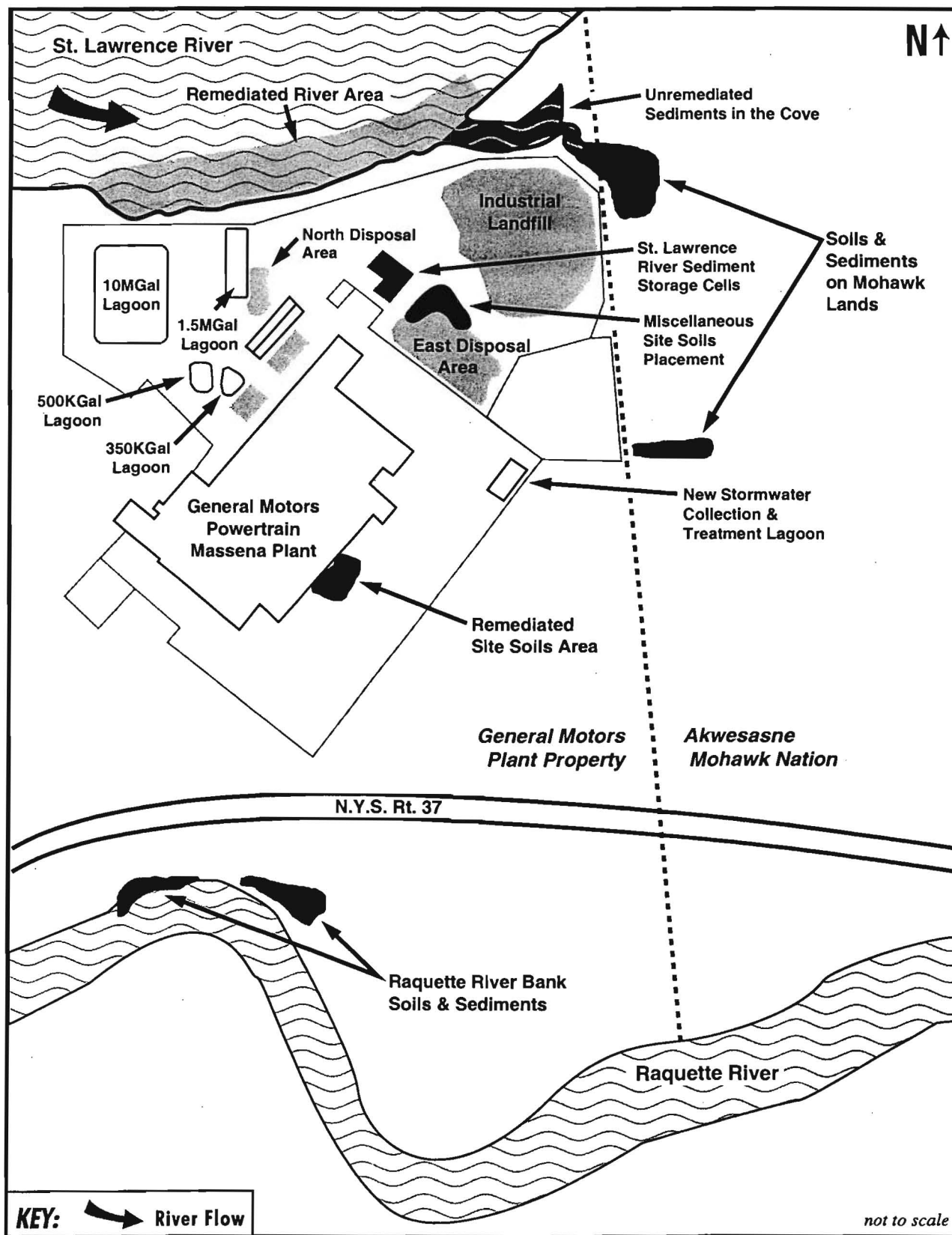


Figure 2